

What is claimed is:

1. A computer-implemented method of modeling, the method comprising:

5 receiving input specifying at least one graphic element of a model diagram, different graphic elements in the diagram including a first graphic element representing a process and a second graphic element representing an object; and

10 based on the received input, generating a textual description of the diagrammed model.

15 2. The method of claim 1, wherein the graphic elements correspond to a notation modeling objects and processes as independent elements.

3. The method of claim 1, wherein the notation comprises Object-Process Methodology notation.

20 4. The method of claim 1, wherein generating the textual description comprises:

determining one or more context-free grammar production rules corresponding to the input; and

25 generating a context-free grammar expression from the one or more context-free grammar production rules.

5. The method of claim 4, wherein the production rules comprises production rules consistent with a natural language.

30 6. The method of claim 1, wherein at least a portion of the model diagram and at least a portion of the textual description are displayed simultaneously.

7. The method of claim 1, wherein the received input comprises receiving user input.

8. The method of claim 7, wherein the generating the textual description comprises generating the description in real-time response to the received user input.

9. The method of claim 1, wherein generating the textual description comprises generating in a batch mode.

10. The method of claim 1, further comprising receiving input specifying a level of detail to depict.

11. The method of claim 10, further comprising determining a portion of the textual description to display based on the received user input specifying the level of detail.

12. The method of claim 1, further comprising translating a label of a graphic element from a first natural language to a second natural language.

13. The method of claim 12, wherein generating the textual description comprises generating using production rules of a context-free grammar for the second natural language.

14. The method of claim 1, further comprising using the generated text to automatically generate software instructions to implement the model.

15. The method of claim 1, further comprising using the generated text to provide a simulation of a modeled system.

16. A computer-implemented method of modeling, the method comprising:

receiving a textual description of a model;

based on the received description, generating a model

5 diagram composed of different graphic elements, the different graphic elements including a first graphic element representing a process and a second graphic element representing an object.

17. The method of claim 16, wherein the graphic elements  
10 correspond to a notation modeling objects and processes as independent elements.

18. The method of claim 17, wherein the notation comprises Object-Process Methodology notation.

19. The method of claim 16, wherein the received textual  
15 description comprises a textual description in a context-free grammar.

20. The method of claim 19, wherein the context-free  
20 grammar comprises a grammar having production rules consistent with a natural language.

21. The method of claim 20, wherein generating the model  
25 comprises parsing the received input in accordance with the production rules.

22. The method of claim 16, wherein at least a portion of  
the model diagram and at least a portion of the textual  
30 description are displayed simultaneously.

23. The method of claim 16, wherein the input comprises user input.

24. The method of claim 23, wherein the generating the  
5 model diagram comprises generating the diagram in real-time response to the received user input.

25. The method of claim 16, wherein generating the textual description comprises generating in a batch mode.

26. The method of claim 16, further comprising receiving input specifying a level of detail to depict.

27. The method of claim 26, further comprising determining  
15 a portion of the model diagram to display based on the received input specifying the level of detail.

28. The method of claim 16, further comprising using the received input to automatically generate software instructions  
20 to implement the model.

29. The method of claim 16, further comprising using the received input to provide a simulation of a modeled system.

30. A method of translating text from a first natural language to a second natural language, the method comprising:  
receiving input specifying a diagram including elements labeled in accordance with a first natural language, the diagram including at least one independent object and at least one  
30 independent process;  
translating the element labels from the first natural language to the second natural language;

generating text in the second natural language in  
accordance with a grammar associated with the diagram elements.

31. The method of claim 30, wherein the diagram comprises  
5 an OPM (Object-Process Methodology) diagram.

32. The method of claim 30, wherein generating text  
comprises generating text using a context-free grammar  
associated with the diagram elements, the context-free grammar  
10 being consistent with the syntax of the second language.

33. A computer program product, disposed on a computer  
readable medium, for modeling, the computer program including  
instructions for causing a processor to:

15 receive input specifying at least one graphic element of a  
model diagram, different graphic elements in the diagram  
including a first graphic element representing a process and a  
second graphic element representing an object;

20 based on the received input, generate a textual description  
of the diagrammed model;

34. A computer program product, disposed on a computer  
readable medium, for modeling, the computer program including  
instructions for causing a processor to:

25 receive a textual description of a model; and

based on the received description, generate a model diagram  
composed of different graphic elements, the different graphic  
elements including a first graphic element representing a  
process and a second graphic element representing an object.

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